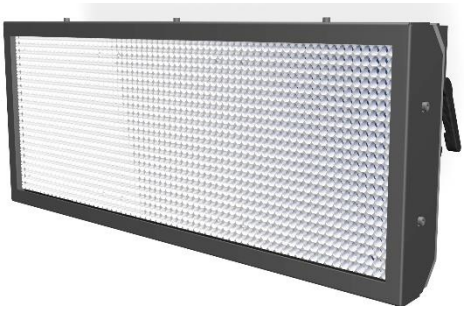
HungaroFLASH

THE FLASH PRODUCER



USER MANUAL

HungaroFLASH LED STROBEs

1.5k Luminaires

IMPORTANT INFORMATION

The material in this manual is for information purposes only and is subject to change without notice. HungaroFLASH assumes no responsibility for any errors or omissions which may appear in this manual. For comments and suggestions regarding corrections and/or updates to this manual, please contact your nearest HungaroFLASH distributor.

Warnings and Notices

- This product is for Professional use only!
- It's not for household use.
- READ AND FOLLOW ALL SAFETY INSTRUCTIONS!
- Do not use outdoors.
- Do not open: there are no user serviceable part inside
- Use only a source of AC power that complies with local building and electrical codes and has both OVERLOAD and EARTH LEAKAGE protection

Additional Resources for **DMX512**

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522).

USITT Contact Information:
USITT
315 South Crouse Avenue, Suite 200
Syracuse, NY 13210-1844
Phone: 1.800.938.7488 or 1.315.463.6463
www.usitt.org

Additional Resources for Remote Device Management over DMX512 Networks - **RDM**

For more information on installing RDM-DMX512 control systems, the following publication is available for purchase from the ANSI E1.20 - 2010 Entertainment Technology RDM Remote Device Management over DMX512 Networks.
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Approved as an American National Standard by the ANSI Board of Standards Review on 4 January 2011

Published By:
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HungaroFLASH Limited Two-Year Warranty

HungaroFLASH offers a two-year limited warranty of its luminaires against defects in materials or workmanship from the date of delivery. A copy of HungaroFLASH two-year limited warranty containing specific terms and conditions can be obtained by contacting your local HungaroFLASH distributor. For more information please visit http://www.hungaroflash.com/dealer-list

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PREFACE

About this Manual

The document provides installation and operation instructions for the following products:

1. HungaroFLASH **1.5k SOL - LED STROBE** Luminaire
2. HungaroFLASH **1.5k RGB - LED STROBE** Luminaire
3. HungaroFLASH **1.5k UV - LED STROBE** Luminaire

Please read all instructions before installing or using this product. Retain this manual for future reference. Additional product information and descriptions may be found on the product specification sheet.

INCLUDED ITEMS

Each LED STROBEs includes the following items:

1. LED STROBE Luminaire

2. MIRROR system for 60^0 beam angle – 3 pcs
   Without mirrors the beam angle is 120^0

3. USER MANUAL

4. AC Power Cable
   - POWERCON
   - 2m cable
   - SCHUKO plug 16A

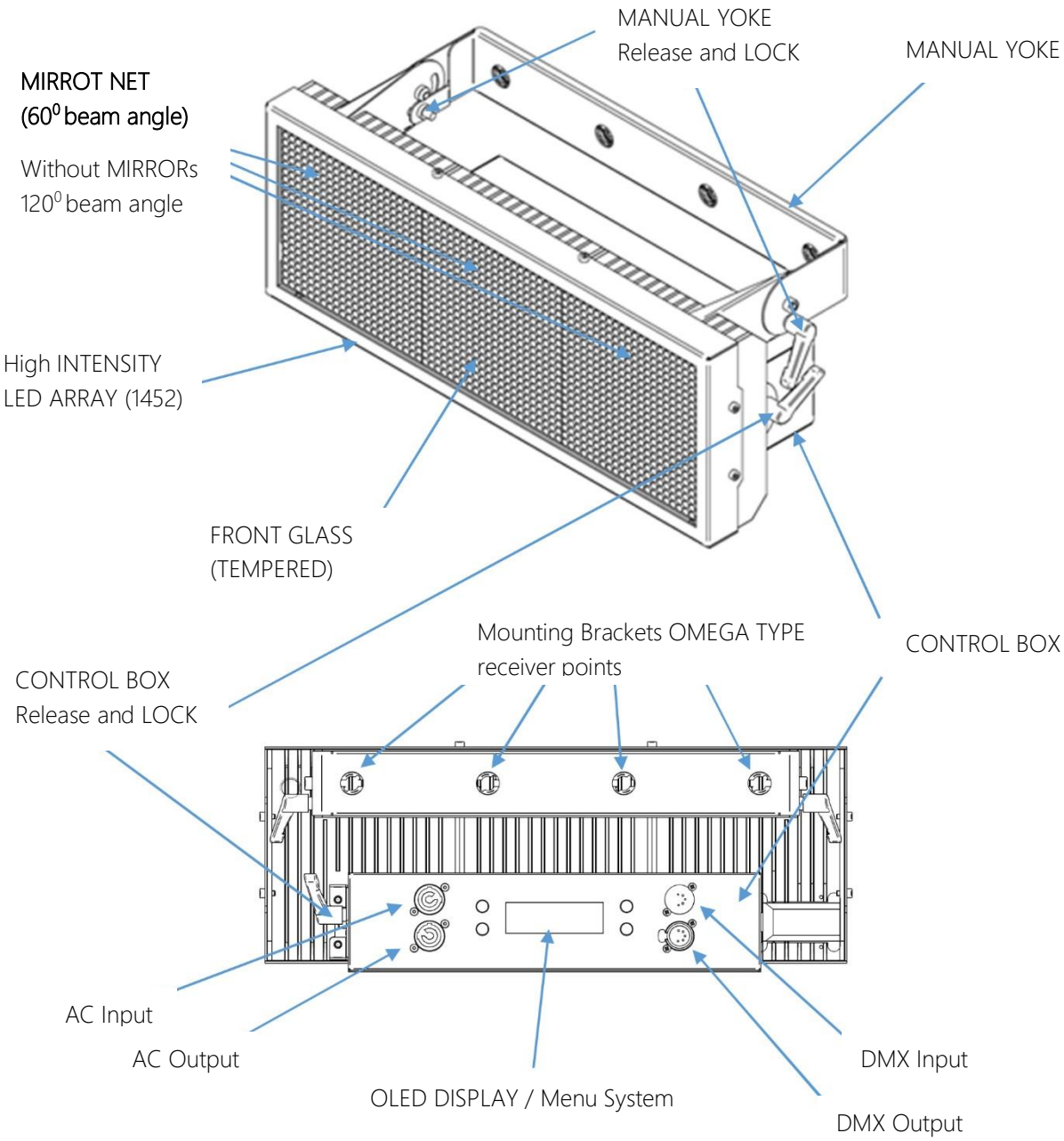
5. Mounting BRACKETS – OMEGA type – 2 pcs

HungaroFLASH LED STROBE Luminaire Accessories

Part Number	Description
HFLEDPC2	Power Cable – 2 meter including POWERCON – to Main
HFLEDMIR3	MIRROR system for 60^0 beam angle – 3 pcs
HFLEDMBO2	Mounting BRACKETS – OMEGA type – 2 pcs
Optional Accessories	
HFLEDPC1	Power Cable – 1 meter including POWERCON **Female** and Female connectors for cable – for the NEXT device Power connection.
HFLEDDMx1	DMX Cable – including Male and Female 5-PIN XLR plug– 1 meter
HFLEDHAN	Adjustable Clamping Lever (steel) - 2 pcs

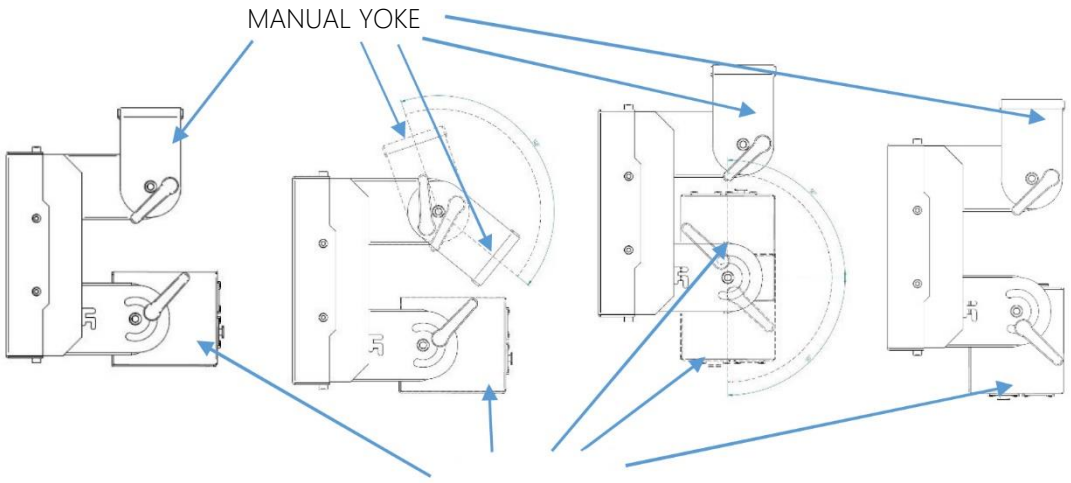
LED STROBE overview

Major COMPONENTs and Terminology



ADJUSTABLE MANUAL YOKE and/or CONTROL BOX

The following figures illustrates the end positions of the MANUAL YOKE and end positions of the CONTROL BOX Rotations.
Between this two end positions the MANUAL YOKE can be locked to any position from 0^0 to 150^0.
CONTROL BOX can be locked to any position from 0^0 to 180^0.



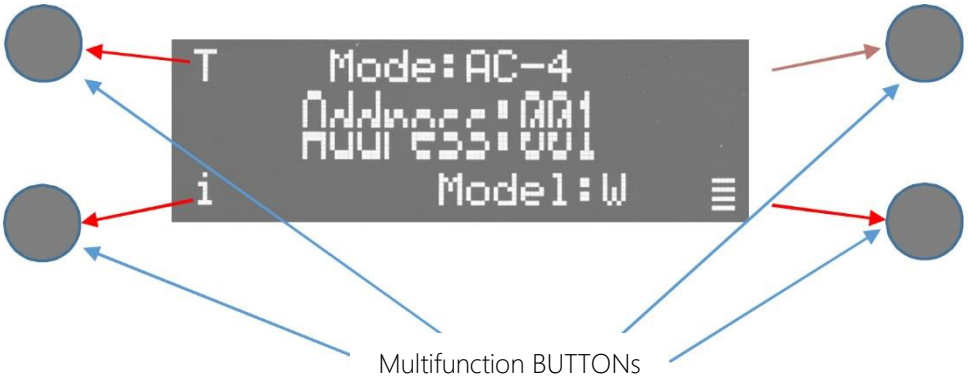
NOTE:

For more Installation and Mounting instruction, refer to the "Mounting Luminaire" on page 10.

OLED DISPLAY / MENU SYSTEM

This is the start SCREEN set by HungaroFLASH factory. Each HungaroFLASH LED STROBE after first FACTORY release is look like this:

DISPLAY and MENU COMPONENTS



NOTE:

Menu orientation **ROTATES AUTOMATICALLY**. It has a sensor to read out mounting directions.
For MENU OPERATION and PROGRAMMING details, refer to "DISPLAY and MENU SYSTEM" on page 11.

INSTALLATION and SET UP

POWER REQUIREMENTs

The following LUMINAIREs operates AC input voltages from 100 to 255 VAC:

1. HungaroFLASH **1.5k SOL - LED STROBE** Luminaire
2. HungaroFLASH **1.5k RGB - LED STROBE** Luminaire
3. HungaroFLASH **1.5k UV - LED STROBE** Luminaire

AC POWER OPERATION

- When connected to AC source, the units operates on 100 – 255 volts AC auto-ranging. The LED STROBEs contains an AUTO-RANGING power supply. Each luminaire can draw up to 460 Watts peak power.
- When connected to 50Hz or 60Hz power lines, the unit AUTOMATICALLY selecting between the two operation modes to allow same functionality for both 50Hz and 60Hz. Regarding this this LED STROBES can be operates next to a HungaroFLASH XENON STROBEs, which has a same feature

When using Daisy-chained connection method between LED strobes, only connect HungaroFLASH LED Strobes luminaires to AC Output connection of HungaroFLASH LED Strobes. DO NOT CONNECT OTHER TYPE OF LUMINAIRES OR DEVICES!

Do NOT connect HungaroFLASH LED Strobes to any DIMMED circuits!

Do not overload circuits!

The MAXIMUM amount of LED Strobes luminaires which may be daisy-chained on ONE power feed are listed in TABLE 1, next, DO NOT EXCEED!

Warning!

- This unit does not contain ON/OFF switch at all. Please unplug the device completely to remove the POWER from unit when not in use.
- Attention: The PowerCon® is a connector without 20A breaking capacity!! The PowerCon® should not be connected or disconnected under load or live!
- Maximum amount of units that may be daisy-chained is 3 units on 90VAC (20Amps) or 3 units on 90VAC (16Amps) or 11 units on 250VAC (20Amps) or 8 units on 250VAC (16Amps). Refer to TABLE 1 for detailed information at various Voltages.

TABLE 1 LED STROBE CURRENT VERSUS VOLTAGE

Voltage (AC)	TOTAL current (A)	Maximum number of units[1]	Maximum number of units[2]
250	1,78	11	8
240	1,87	10	8
230	1,96	10	8
220	2,07	9	7
210	2,18	9	7
200	2,26	8	7
190	2,4	8	6
180	2,51	7	6
170	2,74	7	5
160	2,81	7	5
150	3,03	6	5
140	3,26	6	4
130	3,51	5	4
120	3,85	5	4
110	4,22	4	3
100	4,66	4	3
90	5,29	3	3

- For wiring of AC input connector, refer to "Connecting to HungaroFLASH LED STROBEs to AC Power" on Page 8.

Connecting Power

Units can be powered in two ways:

1. Direct connected to AC power line using AC input cable. For wiring of AC input connector, refer to CONNECT "HungaroFLASH LED STROBEs to AC Power" on this Page 8 below here.
2. Connection from the AC OUTPUT of another HungaroFLASH LED STROBEs. When connect this way, it's very important not to connect any other type of equipment Device.

WARNING! Only connect other HungaroFLASH LED STROBEs to the AC OUTPUT (THRU) connector of a HungaroFLASH LED STROBEs.

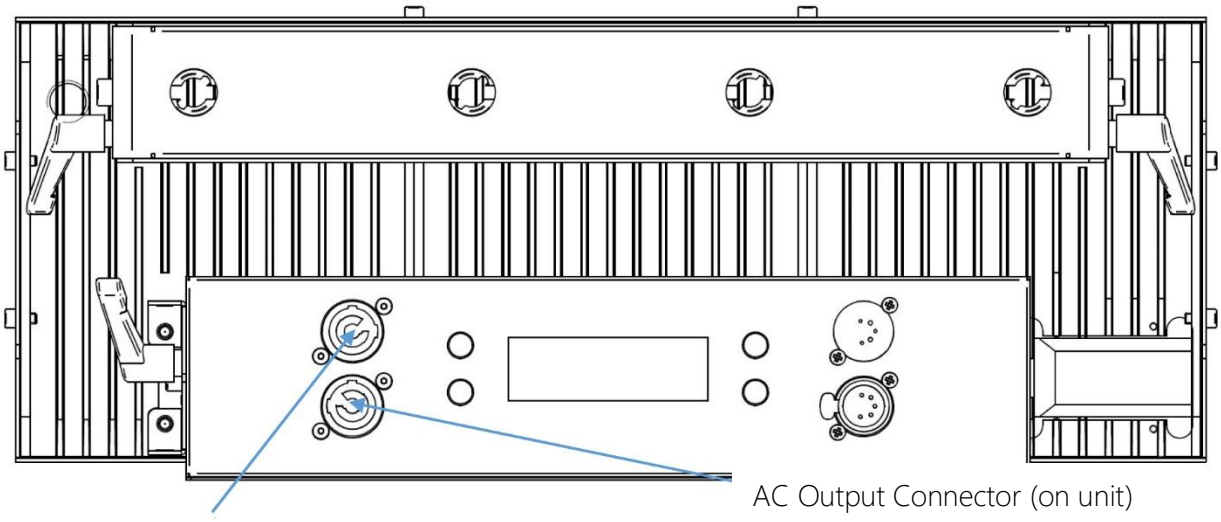
Connecting to HungaroFLASH LED STROBEs to AC Power

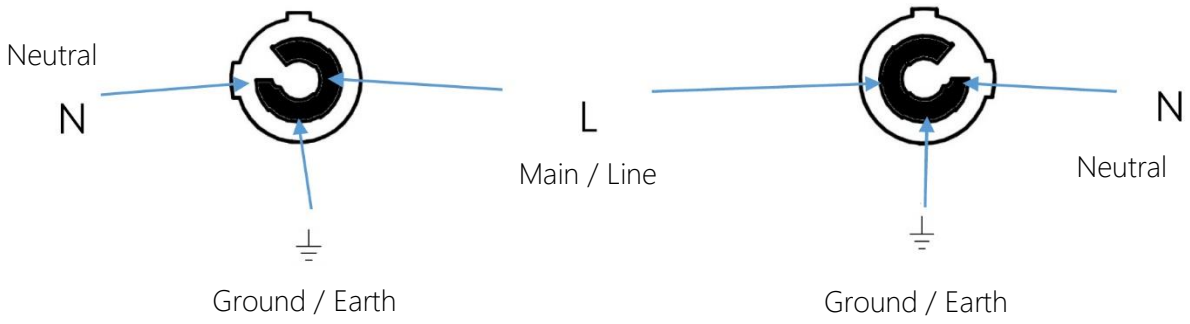
HungaroFLASH LED STROBEs are supplied with an AC input cable -2meter- with input connector installed and 16A SCHUKO connector installed on. In case when example cable length is not enough and need to change cable to custom size by user, the following TABLE 2 describes how to connect power to your HungaroFLASH LED STROBEs.

TABLE 2 HUNGAROFLASH LED STROBES LUMINAIRE AC INPUT CONNECTIONS

WIRE color	PURPOSE
Brown	Main / Line / 90-240VAC
Blue	Neutral
Yellow/Green	Ground (Earth)

Back of the HungaroFLASH LED STROBEs

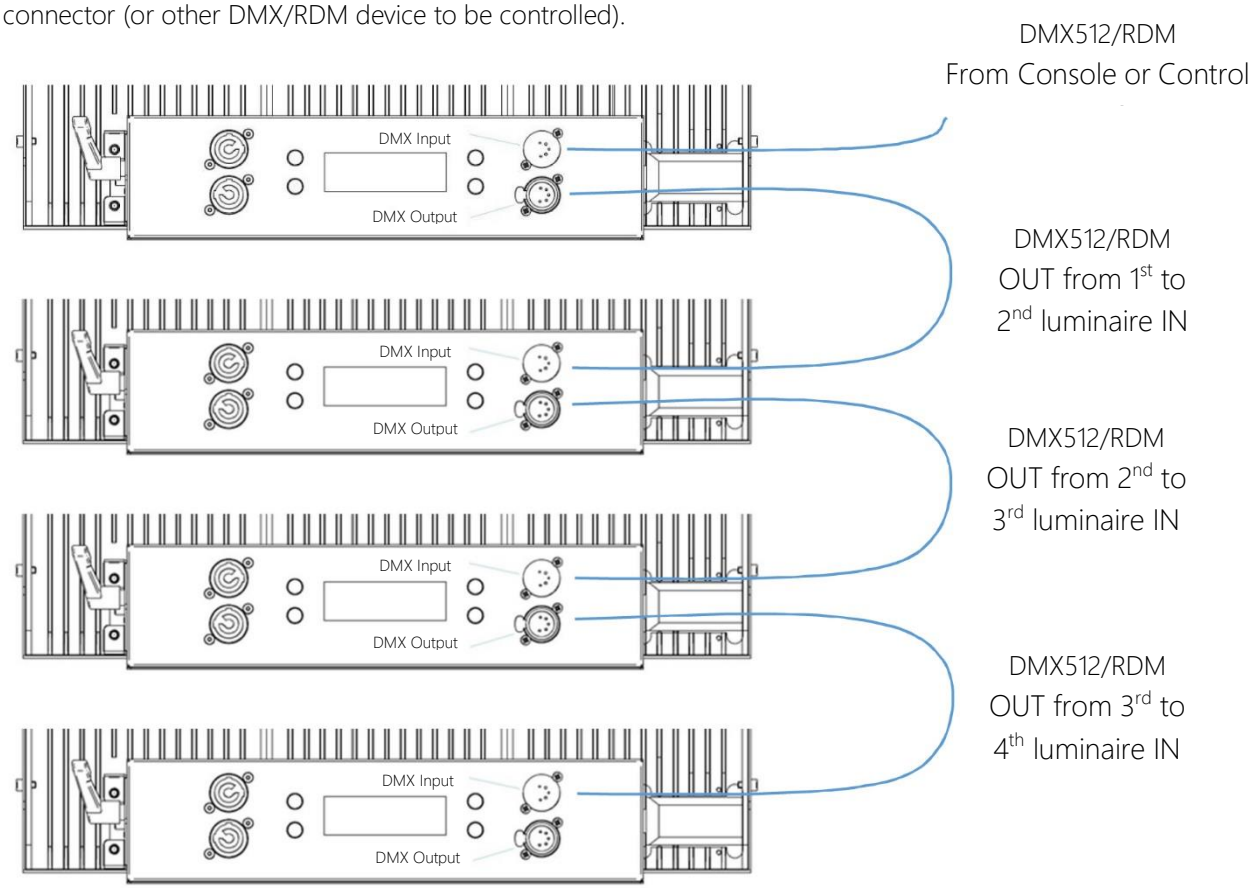




CAUTION: In the event the AC INPUT cable of this Luminaire is DAMAGED, it must be replaced, by the user, with an approved cable through a HungaroFLASH distributor or Service.

CONNECTING to the DMX512 / RDM Network

Basic DMX512installation consists of connecting multiple HungaroFLASH LED STROBEs Luminaires together (up to 32 luminaires) in "daisy-chain" fashion. A DMX Cable runs from the control console (or DMX control source) to the DMX IN connector on the first HungaroFLASH LED STROBE luminaire. Another cable runs from the DMX OUT connector on the first unit to the next Luminaire DMX IN connector (or other DMX/RDM device to be controlled).



Cabling must have a male 5-pin XLR connector on one end and a female 5-pin XLR connector on the other end.

Note:

For more information on DMX512 networking and systems or RDM networking and systems, refer to **"Additional Resources for DMX512"** or **"Additional Resources for Remote Device Management over DMX512 Networks – RDM"** on page 2. For HungaroFLASH LED STROBE luminaire DMX Mapping, refer to "DMX CONTROL" on page 14.

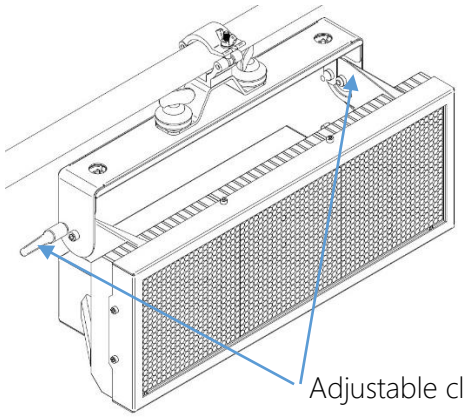
TABLE 3 HUNGAROFLASH LED STROBES – DMX512/RDM CONNECTIONS

DMX512 Signal wires	XLR 5-PIN	Cabling must have a male 5-pinXLR connector on one end and a female 5-pin XLR connector on the other end
Common (Drain)	**1**	
DMX512 -	**2**	
DMX512 +	**3**	
	4	not used
	5	not used

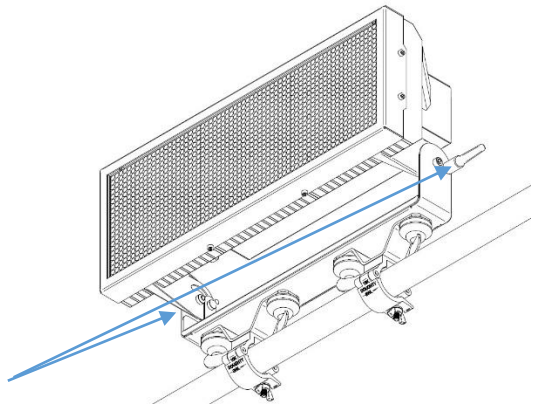
Mounting Luminaire

HungaroFLASH LED STROBEs are provided with the ability to hang via truss hooks, clamps using the Mounting BRACKETs OMEGA type – 2pcs (or just 1 pc) QUICK connected to the MANUAL YOKE. Hooks, clamps sold separately. Simply attach hook, clamp, etc. to the HungaroFLASH LED STROBE Luminaire's Mounting BRACKETs OMEGA type in the provided M10 holes. It's recommended (and may be required by local and national safety codes) to use and install a safety cable (sold separately). When hanging the fixture, be sure to leave enough space around the luminaire to allow proper airflow for natural cooling purposes and positioning.
Adjust the fixture to the desired angle.
After installation release the two Adjustable Clamping Lever (steel) to the desired angel. Then tighten well by hand and index the arm of Adjustable Clamping Lever (steel) as it's desired.
Control Box is also adjustable after releasing its Adjustable Clamping Lever (steel) then tight well as its desired direction for DMX and Power Cables.

Mounting with **1** MOUNTING BRACKET:

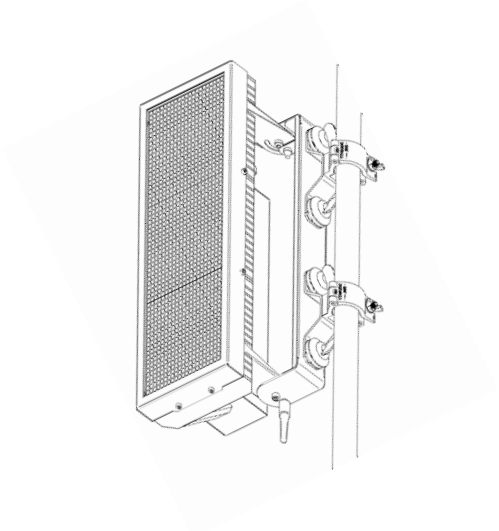


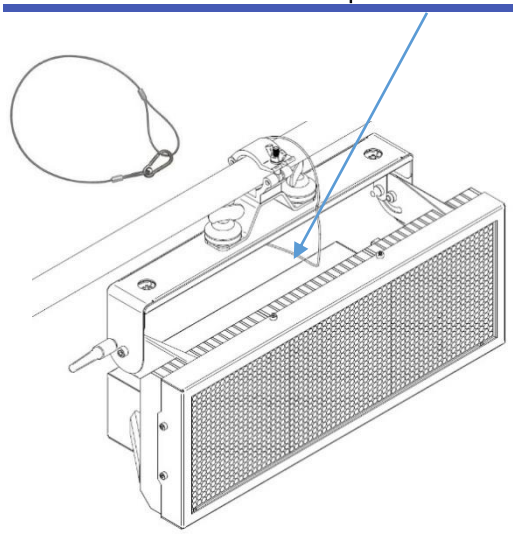
Mounting with **2** MOUNTING BRACKETs:



SAFETY GLOVES: Is sold separately and recommended for all hanging installation and may be required by national and local codes.

SAFETY CABLE: Is sold separately and recommended for all hanging installation and may be required by national and local codes. Use safety cable for MANUAL YOKE like this picture.





HungaroFLASH LED STORBEs luminaires may be mounted in any position.

OPERATION and PROGRAMMING

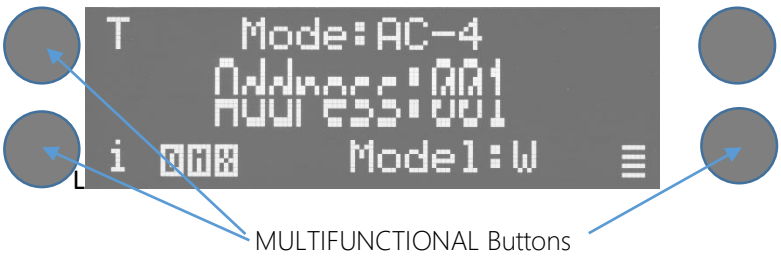
OLED DISPLAY and MENU SYSTEMs

The HungaroFLASH LED STROBEs Luminaire's DISPLAY and MENU SYSTEM provides local control for accessing the following fixture's settings:

- Fixture settings
- Strobe
- DMX modes/ Settings compatibility with other systems
- Current fixture Temperature
- Current Fixture Status Information
- Setting the DMX512 Addresses

Start Screen

Upon power up, the DISPLAY will show the following Starting screen:



- Programmed DMX MODE is **AC-4** (4 channel mode see "DMX MODE selection", refer to page 15)
- Programmed **DMX address** will appear after power up (after first factory release this value is 001).
- If DMX presents, this **DMX** signal indicator is light. If you don't see this DMX, this indicates the DMX connection has a problem
- HungaroFLASH LED STROBE model type/name mark. This mark can be
  - **W** --- HungaroFLASH **1.5k SOL - LED STROBE** Luminaire
  - **RGB** ---HungaroFLASH **1.5k RGB - LED STROBE** Luminaire
  - **UV** --- HungaroFLASH **1.5k UV - LED STROBE** Luminaire

3 MULTIFUNCTIONAL Buttons out of 4 has here functions on the START screen:

- **T** --- Current Temperature on LEDs
- **i** --- Channel INFO. Actual channel numbers and purposes
- **≡** --- MENU selector

Each functions of MULTIFUNCTIONAL Buttons can be remote by for Remote Device Management over DMX512 Networks – RDM. For Remote Device Management over DMX512 Networks DISPLAY and MENU SYSTEMs, refer to the console User manual that is actually using to Remote the Luminaires.

OLED DISPLAY and MENU SYSTEM navigation

The DISPLAY and MANU systems consist of several categories. Use the ≡ MENU selector on display to access and make changes.

To navigate and access MENU settings/selections:

Step 1. Make sure unit is powered and turned ON

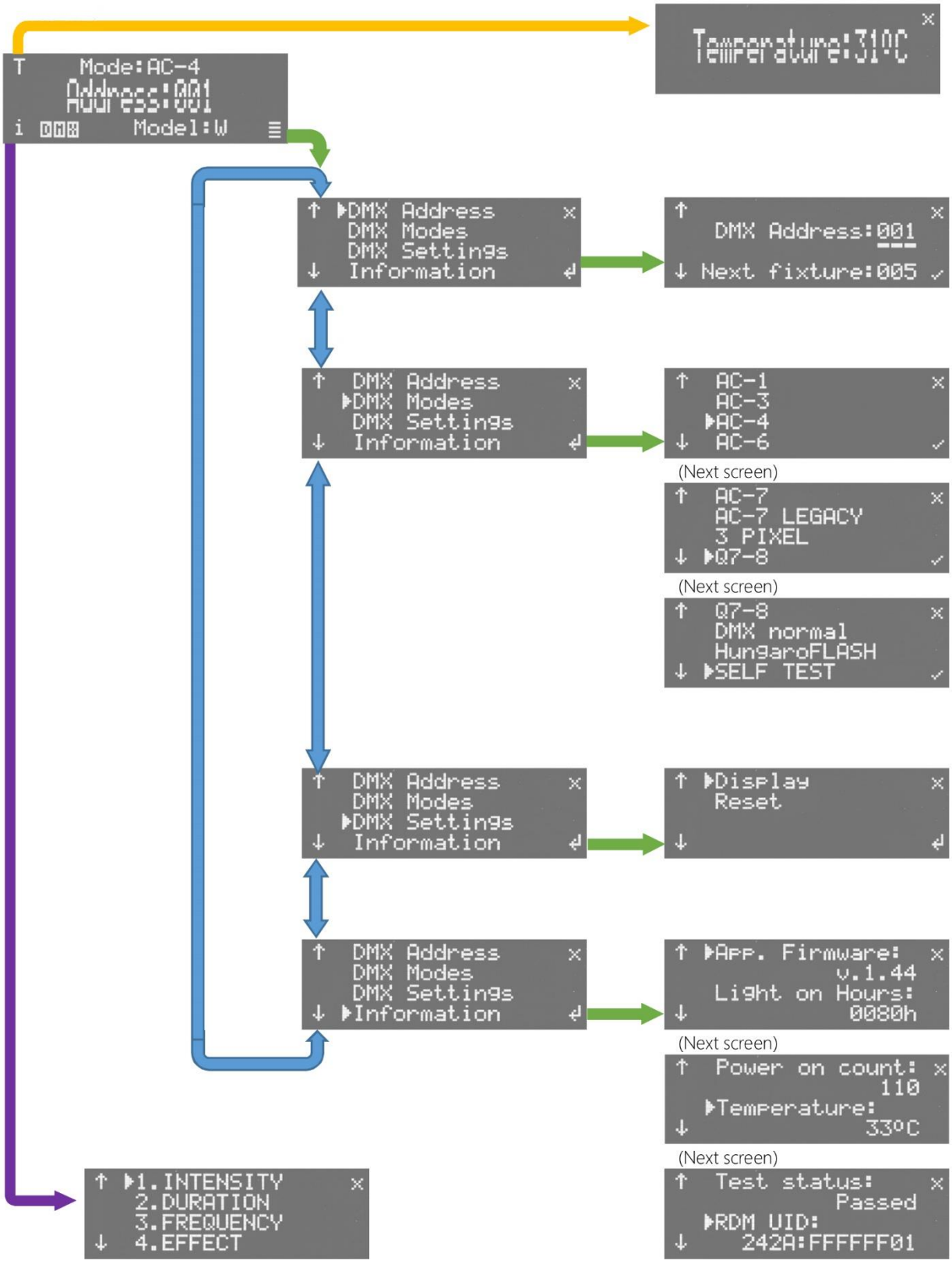
Step 2. Press the desired MULTIIFUNCTIONAL Button to access MENU categories

Step 3. Use Up/Down MULTIFUNCTIONAL Buttons to navigate through the various options and settings. Use **X** MULTIFUNCTIONAL Button to navigate one step BACK or **√** MULTIFUNCTIONAL Button to accept selection

Step 4. Make changes as desired. Use **X** MULTIFUNCTIONAL Button to navigate one step BACK or **√** MULTIFUNCTIONAL Button to accept selection

Control MENU - **MENU MAP**

After START SCREEN you have 3 option to navigate in the MENU System:



DMX Address

You can display and edit the current DMX start address for the fixture by pressing the MULTIFUNCTIONAL Button according to ☰ MENU symbol. The current DMX start address will be display in LARGE DIGITS and after this start address the next line displays the following fixture START Address according to the actual DMX channel set up calculation.

To edit the DMX start address:

1. Press ☰ MENU button to entering to the MENU system.
2. Press √ Check Mark button to begin the DMX start address editing.
3. Press ↑/↓ Up/Down arrows to change the DMX start value as desired.
4. Press √ Check Mark button to save the new DMX start address. In the same moment you see the next fixture Start address.

DMX Control

This section contains information for operating the luminaire using one of the DMX control MODEs as set by the luminaire's MENU SYSTEM:

- Single Channel Mode as it on DISPLAY: AC-1
- Three Channel Mode as it on DISPLAY: AC-3
- Four Channel Mode as it on DISPLAY: AC-4
- Six Channel Mode as it on DISPLAY: AC-6
- Seven Channel Mode as it on DISPLAY: AC-7
- Seven Channel Mode as it on DISPLAY: AC-7 Legacy
- Three Channel Mode as it on DISPLAY: 3 PIXEL
- Eight Channel Mode as it on DISPLAY: Q7-8
- Two Channel Mode as it on DISPLAY: DMX normal
- Two Channel Mode as it on DISPLAY: HungaroFLASH

NOTE:

These tables assume a DMX Start address of 1. When a different starting address is used, this address becomes channel 1 function and other function follow is sequence.

Single Channel Mode as it on DISPLAY: AC-1

Table 4 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in AC-1 (Single Channel DMX512 mode) (as set by the luminaire's menu system).

TABLE 4: AC-1 CHANNEL MAPPING (SINGLE CHANNEL MODE)

	DMX Channel	DMX value/ range DMX	Percent / Range%	Description
AC-1	1	0-5 6-249 250-255	0-1 2-97 98-100	Blackout **FLASH RATE** slow-fast CONTINUOUS – Blinder effect "Strobe Rate DMX Timing Detail" on page 20

Three Channel Mode as it on DISPLAY: AC-3

Table 5 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in AC-3 (Three Channel DMX512 mode) (as set by the luminaire's menu system).

TABLE 5: AC-3 CHANNEL MAPPING (THREE CHANNEL MODE)

	DMX Channel	DMX value/ range DMX	Percent / Range%	Description
AC-3	1	0-5 6-255	0-1 2-100	**FLASH intensity** Blackout Min to MAX Intensity
	2	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC Strobe Duration DMX Timing Detail" on page 21
	3	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20

Four Channel Mode as it on **DISPLAY: AC-4**

Table 6 - 7 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in AC-4 (Four Channel DMX512 mode) and AC-6 (Six channel DMX512 mode) (as set by the luminaire's menu system).

TABLE 6: AC-4 CHANNEL MAPPING (FOUR CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-5 6-255	0-1 2-100	**FLASH intensity** Blackout Min to MAX Intensity	**AC-4**
2	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 21	
3	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20	
4	0-5 6-42 43-85 86-128 129-171 172-214 215-255	0-1 2-16 17-33 34-50 51-67 68-83 84-100	**Special effect** No effect! Ramp up Ramp down Ramp up than down Random Lightning Spikes	

Six Channel Mode as it on **DISPLAY: AC-6**

TABLE 7: AC-6 CHANNEL MAPPING (SIX CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-5 6-255	0-1 2-100	**MASTER FLASH intensity** Blackout Min to MAX Intensity	**AC-6**
2	0-5 6-255	0-1 2-100	**RED/ Segment 1 intensity** Intensity of RED (RGB) Or SEGMENT 1 (SOL-UV)	
3	0-5 6-255	0-1 2-100	**GREEN/ Segment 2 intensity** Intensity of GREEN (RGB) Or SEGMENT 2 (SOL- UV)	
4	0-5 6-255	0-1 2-100	**BLUE/ Segment 3 intensity** Intensity of BLUE (RGB) Or SEGMENT 3 (SOL- UV)	
5	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 21	
6	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20	

Seven Channel Mode as it on **DISPLAY: AC-7**

Table 8 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in AC-7 (Seven Channel DMX512 mode) (as set by the luminaire's menu system).

TABLE 8: AC-7 CHANNEL MAPPING (SEVEN CHANNEL MODE)

	DMX Channel	DMX value/ range DMX	Percent / Range%	Description
AC-7	1	0-5 6-255	0-1 2-100	**MASTER FLASH intensity** Blackout Min to MAX Intensity
	2	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 21
	3	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20
	4	0-5 6-42 43-85 86-128 129-171 172-214 215-255	0-1 2-16 17-33 34-50 51-67 68-83 84-100	**Special effect** No effect! Ramp up Ramp down Ramp up than down Random Lightning Spikes
	5	0-255	0-1 2-100	**RED/ Segment 1 intensity** Intensity of RED (RGB) Or SEGMENT 1 (SOL- UV)
	6	0-255	0-1 2-100	**GREEN/ Segment 2 intensity** Intensity of GREEN (RGB) Or SEGMENT 2 (SOL- UV)
	7	0-255	0-1 2-100	**BLUE/ Segment 3 intensity** Intensity of BLUE (RGB) Or SEGMENT 3 (SOL- UV)

Seven Channel LEGACY Mode as it on DISPLAY: **AC-7 Legacy**

Table 9 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in AC-7 Legacy (Seven Channel DMX512 mode) (as set by the luminaire's menu system).

TABLE 9: AC-7 CHANNEL MAPPING (SEVEN CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-5 6-255	0-1 2-100	**MASTER FLASH intensity** Blackout Min to MAX Intensity	**AC-7 Legacy**
2	0-5 6-255	0-1 2-100	**RED/ Segment 1 intensity** Intensity of RED (RGB) Or SEGMENT 1 (SOL-UV)	
3	0-5 6-255	0-1 2-100	**GREEN/ Segment 2 intensity** Intensity of GREEN (RGB) Or SEGMENT 2 (SOL- UV)	
4	0-5 6-255	0-1 2-100	**BLUE/ Segment 3 intensity** Intensity of BLUE (RGB) Or SEGMENT 3 (SOL- UV)	
5	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 21	
6	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20	
7	0-5 6-42 43-85 86-128 129-171 172-214 215-255	0-1 2-16 17-33 34-50 51-67 68-83 84-100	**Special effect** No effect! Ramp up Ramp down Ramp up than down Random Lightning Spikes	

Three Channel Mode as it on DISPLAY: **3 PIXEL**

TABLE 10: 3 PIXEL CHANNEL MAPPING (THREE CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-5 6-255	0-1 2-100	**RED/ Segment 1 intensity** Intensity of RED (RGB) Or SEGMENT 1 (SOL-UV)	**3 PIXEL**
2	0-5 6-255	0-1 2-100	**GREEN/ Segment 2 intensity** Intensity of GREEN (RGB) Or SEGMENT 2 (SOL- UV)	
3	0-5 6-255	0-1 2-100	**BLUE/ Segment 3 intensity** Intensity of BLUE (RGB) Or SEGMENT 3 (SOL- UV)	

Eight Channel Mode as it on DISPLAY: Q7-8

Table 11 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in Q7-8 (Eight Channel DMX512 mode) (as set by the luminaire's menu system). This MODE requires two strobes (Strobe 1 is RGB and Strobe 2 is a WHITE) to get it work. See the following figure for further connection information:

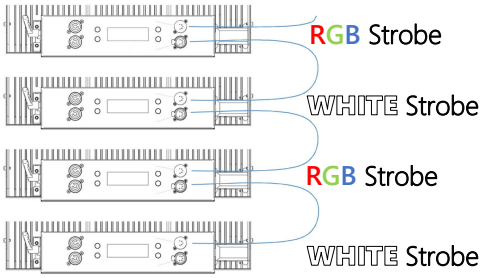


TABLE 11: Q7-8 CHANNEL MAPPING (EIGHT CHANNEL MODE)

	DMX Channel	DMX value/ range DMX	Percent / Range%	Description
Q7-8	1	0-5 6-255	0-1 2-100	**FLASH intensity** Blackout Min to MAX Intensity
	2	0-255	0-100	**FLASH duration** 0-640ms @ 50 Hz AC 0-533ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 21
	3	0-5 6-255	0-1 2-100	**FLASH rate** NO FLASH! 0,5-25Hz @ 50Hz AC 0,6-30Hz @ 60Hz AC "Strobe Rate DMX Timing Detail" on page 20
	4	0-5 6-42 43-85 86-128 129-171 172-214 215-255	0-1 2-16 17-33 34-50 51-67 68-83 84-100	**Special effect** No effect! Ramp up Ramp down Ramp up than down Random Lightning Spikes
	5	0-255	0-1 2-100	**RED** Intensity of RED (RGB) On RGB Strobe
	6	0-255	0-1 2-100	**GREEN** Intensity of GREEN (RGB) On RGB Strobe
	7	0-255	0-1 2-100	**BLUE** Intensity of BLUE (RGB) On RGB Strobe
	8	0-255	0-1 2-100	WHITE Intensity of WHITE On WHITE Strobe

Two Channel Mode as it on DISPLAY: **DMX normal**

Table 12 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in DMX normal mode (Two Channel DMX512 mode) (as set by the luminaire's menu system). This MODE allow you to use HungaroFLASH LED STOBEs strobes with other HungaroFLASH XENON type strobes and perform synchronal flashing show if desired.

TABLE 12: DMX NORMAL CHANNEL MAPPING (TWO CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-25 26-229 230-255	0-10 11-90 91-100	**FLASH rate** NO FLASH! 2-20Hz @ 50Hz AC 2,4-24Hz @ 60Hz AC CONTINUOUS – Blinder effect "Strobe Rate DMX Timing Detail" on page 22	**DMX normal**
2	0-3 4-255	0-1 2-100	**FLASH intensity** NO FLASH! Min to MAX Intensity	

Two Channel Mode as it on DISPLAY: **HungaroFLASH**

Table 13 provides DMX Channel mapping of the DMX512 control values when the HungaroFLASH LED STROBE Luminaire is in HungaroFLASH mode (Two Channel DMX512 mode) (as set by the luminaire's menu system)

TABLE 13: HUNGAROFLASH CHANNEL MAPPING (TWO CHANNEL MODE)

DMX Channel	DMX value/ range DMX	Percent / Range%	Description	
1	0-3 4-255	0-1 2-100	**FLASH INTENSITY** NO FLASH! Min to MAX	**HungaroFLASH**
2	0-255	0-100	**FLASH duration** 20-1280ms @ 50 Hz AC 16,667-1066ms @ 60 Hz AC "Strobe Duration DMX Timing Detail" on page 23	
IMPORTANT for **FLASH RATE**: FLASH rate has no dedicated DMX channel here and no DMX Value/percentage. This DMX MODE **HungaroFLASH** is compatible with AF1000 luminaires. The Luminaire in this DMX mode will FLASH every time when it receives a Higher DMX value then 4 (on DMX channel 1st) flash with a Flash DURATION as it set on coming sequence channel (duration on channel 2nd). **FLASH RATE** is determined by DMX CONSOLE Repeat rate –adjustable if Console has it adjust- or programmable by user. This DMX MODE is guarantee a SYNCHRON flash with no delay.				

Strobe **Rate DMX Timing** Detail (for AC-1; -3; -4; -6; -7; -7 Legacy; -Q7-8 MODE)

The chart below describes the Strobe Rate DMX parameters of the HungaroFLASH LED STROBE Luminaire for AC-1; -3; -4; -6; -7; -7 Legacy; -Q7-8 MODEs.

TABLE 14: STROBE RATE DMX TIMING DETAIL

DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)
0	0		64	25	4,167	128	50	8,333	192	75	12,5
1	0	DMX 0-5 No FLASH (single flahs with value >5 on intensity channel 1 time	65	25	4,167	129	50	8,333	193	75	12,500
2	0		66	26	4,545	130	50	8,333	194	76	12,500
3	1		67	26	4,545	131	51	8,333	195	76	12,500
4	1		68	26	4,545	132	51	8,333	196	76	12,500
5	2		69	27	4,545	133	52	8,333	197	77	12,500
6	2	0,289	70	27	4,545	134	52	8,333	198	77	12,500
7	2	0,289	71	28	4,545	135	52	8,333	199	78	12,500
8	3	0,431	72	28	5,000	136	53	8,333	200	78	12,500
9	3	0,431	73	28	5,000	137	53	8,333	201	78	12,500
10	4	0,575	74	29	5,000	138	54	8,333	202	79	12,500
11	4	0,575	75	29	5,000	139	54	8,333	203	79	12,500
12	4	0,714	76	30	5,000	140	54	8,333	204	80	12,500
13	5	0,714	77	30	5,000	141	55	8,333	205	80	12,500
14	5	0,862	78	30	5,000	142	55	10,000	206	80	12,500
15	6	0,862	79	31	5,000	143	56	10,000	207	81	12,500
16	6	1,000	80	31	5,556	144	56	10,000	208	81	12,500
17	6	1,000	81	32	5,556	145	56	10,000	209	82	12,500
18	7	1,136	82	32	5,556	146	57	10,000	210	82	12,500
19	7	1,136	83	32	5,556	147	57	10,000	211	82	12,500
20	8	1,282	84	33	5,556	148	58	10,000	212	83	12,500
21	8	1,282	85	33	5,556	149	58	10,000	213	83	12,500
22	8	1,429	86	34	5,556	150	59	10,000	214	84	12,500
23	9	1,429	87	34	5,556	151	59	10,000	215	84	12,500
24	9	1,563	88	34	5,556	152	59	10,000	216	84	12,500
25	10	1,563	89	35	5,556	153	60	10,000	217	85	12,500
26	10	1,724	90	35	6,250	154	60	10,000	218	85	12,500
27	10	1,724	91	36	6,250	155	60	10,000	219	86	12,500
28	11	1,852	92	36	6,250	156	61	10,000	220	86	12,500
29	11	1,852	93	36	6,250	157	61	10,000	221	86	12,500
30	12	2,000	94	37	6,250	158	62	10,000	222	87	12,500
31	12	2,000	95	37	6,250	159	62	10,000	223	87	12,500
32	12	2,083	96	38	6,250	160	62	10,000	224	88	12,500
33	13	2,083	97	38	6,250	161	63	10,000	225	88	12,500
34	13	2,273	98	38	6,250	162	63	10,000	226	88	12,500
35	14	2,273	99	39	6,250	163	64	10,000	227	89	12,500
36	14	2,381	100	39	6,250	164	64	10,000	228	89	12,500
37	14	2,381	101	39	6,250	165	64	10,000	229	90	12,500
38	15	2,500	102	40	7,143	166	65	10,000	230	90	12,500
39	15	2,500	103	40	7,143	167	65	10,000	231	90	12,500
40	16	2,632	104	40	7,143	168	66	10,000	232	91	12,500
41	16	2,632	105	41	7,143	169	66	10,000	233	91	12,500
42	16	2,778	106	41	7,143	170	66	10,000	234	91	16,667
43	17	2,778	107	42	7,143	171	67	10,000	235	92	16,667
44	17	2,941	108	42	7,143	172	67	10,000	236	92	16,667
45	18	2,941	109	42	7,143	173	68	10,000	237	92	16,667
46	18	3,125	110	43	7,143	174	68	10,000	238	93	16,667
47	18	3,125	111	43	7,143	175	68	10,000	239	93	16,667
48	19	3,125	112	44	7,143	176	69	12,500	240	94	16,667
49	19	3,125	113	44	7,143	177	69	12,500	241	94	16,667
50	19	3,333	114	44	7,143	178	70	12,500	242	94	16,667
51	20	3,333	115	45	7,143	179	70	12,500	243	95	16,667
52	20	3,571	116	45	7,143	180	70	12,500	244	95	16,667
53	20	3,571	117	46	7,143	181	71	12,500	245	96	16,667
54	21	3,571	118	46	8,333	182	71	12,500	246	96	16,667
55	21	3,571	119	46	8,333	183	72	12,500	247	96	16,667
56	22	3,846	120	47	8,333	184	72	12,500	248	97	16,667
57	22	3,846	121	47	8,333	185	72	12,500	249	97	16,667
58	22	3,846	122	48	8,333	186	73	12,500	250	98	50,000
59	23	3,846	123	48	8,333	187	73	12,500	251	98	50,000
60	23	4,167	124	48	8,333	188	73	12,500	252	98	50,000
61	24	4,167	125	49	8,333	189	74	12,500	253	99	50,000
62	24	4,167	126	49	8,333	190	74	12,500	254	99	50,000
63	24	4,167	127	49	8,333	191	74	12,500	255	100	50,000

Note: Continuous ON Mode illuminates all LEDs without flashing. This feature is activated when Strobe Rate and Strobe Duration are both set to DMX value 255.

Strobe **Duration DMX Timing** Detail (for AC-1; -3; -4; -6; -7; -7 Legacy; -Q7-8 MODE)

The chart below describes the Strobe Duration DMX parameters of the HungaroFLASH LED STROBE Luminaire.

TABLE 15: STROBE DURATION DMX TIMING DETAIL

DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)
0	0	20	64	25	160	128	50	320	192	75	480
1	0	20	65	25	160	129	50	320	193	75	480
2	0	20	66	26	160	130	50	320	194	76	480
3	1	20	67	26	160	131	51	320	195	76	480
4	1	20	68	26	160	132	51	320	196	76	480
5	2	20	69	27	160	133	52	320	197	77	480
6	2	20	70	27	180	134	52	340	198	77	500
7	2	20	71	28	180	135	52	340	199	78	500
8	3	20	72	28	180	136	53	340	200	78	500
9	3	20	73	28	180	137	53	340	201	78	500
10	4	20	74	29	180	138	54	340	202	79	500
11	4	20	75	29	180	139	54	340	203	79	500
12	4	20	76	30	180	140	54	340	204	80	500
13	5	20	77	30	180	141	55	340	205	80	500
14	5	40	78	30	200	142	55	360	206	80	520
15	6	40	79	31	200	143	56	360	207	81	520
16	6	40	80	31	200	144	56	360	208	81	520
17	6	40	81	32	200	145	56	360	209	82	520
18	7	40	82	32	200	146	57	360	210	82	520
19	7	40	83	32	200	147	57	360	211	82	520
20	8	40	84	33	200	148	58	360	212	83	520
21	8	40	85	33	200	149	58	360	213	83	520
22	8	60	86	34	220	150	59	380	214	84	540
23	9	60	87	34	220	151	59	380	215	84	540
24	9	60	88	34	220	152	59	380	216	84	540
25	10	60	89	35	220	153	60	380	217	85	540
26	10	60	90	35	220	154	60	380	218	85	540
27	10	60	91	36	220	155	60	380	219	86	540
28	11	60	92	36	220	156	61	380	220	86	540
29	11	60	93	36	220	157	61	380	221	86	540
30	12	80	94	37	240	158	62	400	222	87	560
31	12	80	95	37	240	159	62	400	223	87	560
32	12	80	96	38	240	160	62	400	224	88	560
33	13	80	97	38	240	161	63	400	225	88	560
34	13	80	98	38	240	162	63	400	226	88	560
35	14	80	99	39	240	163	64	400	227	89	560
36	14	80	100	39	240	164	64	400	228	89	560
37	14	80	101	39	240	165	64	400	229	90	560
38	15	100	102	40	260	166	65	420	230	90	580
39	15	100	103	40	260	167	65	420	231	90	580
40	16	100	104	40	260	168	66	420	232	91	580
41	16	100	105	41	260	169	66	420	233	91	580
42	16	100	106	41	260	170	66	420	234	91	580
43	17	100	107	42	260	171	67	420	235	92	580
44	17	100	108	42	260	172	67	420	236	92	580
45	18	100	109	42	260	173	68	420	237	92	580
46	18	120	110	43	280	174	68	440	238	93	600
47	18	120	111	43	280	175	68	440	239	93	600
48	19	120	112	44	280	176	69	440	240	94	600
49	19	120	113	44	280	177	69	440	241	94	600
50	19	120	114	44	280	178	70	440	242	94	600
51	20	120	115	45	280	179	70	440	243	95	600
52	20	120	116	45	280	180	70	440	244	95	600
53	20	120	117	46	280	181	71	440	245	96	600
54	21	140	118	46	300	182	71	460	246	96	620
55	21	140	119	46	300	183	72	460	247	96	620
56	22	140	120	47	300	184	72	460	248	97	620
57	22	140	121	47	300	185	72	460	249	97	620
58	22	140	122	48	300	186	73	460	250	98	620
59	23	140	123	48	300	187	73	460	251	98	620
60	23	140	124	48	300	188	73	460	252	98	620
61	24	140	125	49	300	189	74	460	253	99	620
62	24	160	126	49	320	190	74	480	254	99	640
63	24	160	127	49	320	191	74	480	255	100	640

Note: Continuous ON Mode illuminates all LEDs without flashing. This feature is activated when Strobe Rate and Strobe Duration are both set to DMX value 255.

Strobe **Rate DMX Timing** Detail HF
(for DMX normal MODE)

The chart below describes the Strobe Duration DMX parameters of the HungaroFLASH LED STROBE Luminaire for DMX normal MODE.

TABLE 16: STROBE RATE DMX TIMING DETAIL (FOR DMX NORMAL MODE)

DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)	DMX Value	Percent (%)	Frequency (Hz)
0	0	0	64	25	2,500	128	50	4,167	192	75	12,500
1	0	0	65	25	2,500	129	50	4,167	193	75	12,500
2	0	0	66	26	2,564	130	50	4,348	194	76	14,286
3	1	0	67	26	2,564	131	51	4,348	195	76	14,286
4	1	0	68	26	2,564	132	51	4,348	196	76	14,286
5	2	0	69	27	2,564	133	52	4,348	197	77	14,286
6	2	0	70	27	2,632	134	52	4,545	198	77	16,667
7	2	0	71	28	2,632	135	52	4,545	199	78	16,667
8	3	0	72	28	2,632	136	53	4,545	200	78	16,667
9	3	0	73	28	2,632	137	53	4,545	201	78	16,667
10	4	0	74	29	2,703	138	54	4,762	202	79	20,000
11	4	0	75	29	2,703	139	54	4,762	203	79	20,000
12	4	0	76	30	2,703	140	54	4,762	204	80	20,000
13	5	0	77	30	2,703	141	55	4,762	205	80	20,000
14	5	0	78	30	2,778	142	55	5,000	206	80	20,000
15	6	0	79	31	2,778	143	56	5,000	207	81	20,000
16	6	0	80	31	2,778	144	56	5,000	208	81	20,000
17	6	0	81	32	2,778	145	56	5,000	209	82	20,000
18	7	0	82	32	2,857	146	57	5,263	210	82	20,000
19	7	0	83	32	2,857	147	57	5,263	211	82	20,000
20	8	0	84	33	2,857	148	58	5,263	212	83	20,000
21	8	0	85	33	2,857	149	58	5,263	213	83	20,000
22	8	0	86	34	2,941	150	59	5,556	214	84	20,000
23	9	0	87	34	2,941	151	59	5,556	215	84	20,000
24	9	0	88	34	2,941	152	59	5,556	216	84	20,000
25	10	0	89	35	2,941	153	60	5,556	217	85	20,000
26	10	2,041	90	35	3,030	154	60	5,882	218	85	20,000
27	10	2,041	91	36	3,030	155	60	5,882	219	86	20,000
28	11	2,041	92	36	3,030	156	61	5,882	220	86	20,000
29	11	2,041	93	36	3,030	157	61	5,882	221	86	20,000
30	12	2,083	94	37	3,125	158	62	6,250	222	87	20,000
31	12	2,083	95	37	3,125	159	62	6,250	223	87	20,000
32	12	2,083	96	38	3,125	160	62	6,250	224	88	20,000
33	13	2,083	97	38	3,125	161	63	6,250	225	88	20,000
34	13	2,128	98	38	3,226	162	63	6,667	226	88	20,000
35	14	2,128	99	39	3,226	163	64	6,667	227	89	20,000
36	14	2,128	100	39	3,226	164	64	6,667	228	89	20,000
37	14	2,128	101	39	3,226	165	64	6,667	229	90	20,000
38	15	2,174	102	40	3,333	166	65	7,143	230	90	50,000
39	15	2,174	103	40	3,333	167	65	7,143	231	90	50,000
40	16	2,174	104	40	3,333	168	66	7,143	232	91	50,000
41	16	2,174	105	41	3,333	169	66	7,143	233	91	50,000
42	16	2,222	106	41	3,448	170	66	7,692	234	91	50,000
43	17	2,222	107	42	3,448	171	67	7,692	235	92	50,000
44	17	2,222	108	42	3,448	172	67	7,692	236	92	50,000
45	18	2,222	109	42	3,448	173	68	7,692	237	92	50,000
46	18	2,273	110	43	3,571	174	68	8,333	238	93	50,000
47	18	2,273	111	43	3,571	175	68	8,333	239	93	50,000
48	19	2,273	112	44	3,571	176	69	8,333	240	94	50,000
49	19	2,273	113	44	3,571	177	69	8,333	241	94	50,000
50	19	2,326	114	44	3,704	178	70	9,091	242	94	50,000
51	20	2,326	115	45	3,704	179	70	9,091	243	95	50,000
52	20	2,326	116	45	3,704	180	70	9,091	244	95	50,000
53	20	2,326	117	46	3,704	181	71	9,091	245	96	50,000
54	21	2,381	118	46	3,846	182	71	10,000	246	96	50,000
55	21	2,381	119	46	3,846	183	72	10,000	247	96	50,000
56	22	2,381	120	47	3,846	184	72	10,000	248	97	50,000
57	22	2,381	121	47	3,846	185	72	10,000	249	97	50,000
58	22	2,439	122	48	4,000	186	73	11,111	250	98	50,000
59	23	2,439	123	48	4,000	187	73	11,111	251	98	50,000
60	23	2,439	124	48	4,000	188	73	11,111	252	98	50,000
61	24	2,439	125	49	4,000	189	74	11,111	253	99	50,000
62	24	2,500	126	49	4,167	190	74	12,500	254	99	50,000
63	24	2,500	127	49	4,167	191	74	12,500	255	100	50,000

Note: Continuous ON Mode illuminates all LEDs without flashing. This feature is activated when Strobe Rate and Strobe Duration are both set to DMX value 255.

Strobe **Duration DMX Timing** Detail HF
(for HungaroFLASH MODE)

The chart below describes the Strobe Duration DMX parameters of the HungaroFLASH LED STROBE Luminaire for HungaroFLASH MODE.

TABLE 17: STROBE DURATION DMX TIMING DETAIL

DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)	DMX Value	Percent (%)	Time (ms)
0	0	20	64	25	340	128	50	660	192	75	980
1	0	20	65	25	340	129	50	660	193	75	980
2	0	20	66	26	340	130	50	660	194	76	980
3	1	20	67	26	340	131	51	660	195	76	980
4	1	40	68	26	360	132	51	680	196	76	1000
5	2	40	69	27	360	133	52	680	197	77	1000
6	2	40	70	27	360	134	52	680	198	77	1000
7	2	40	71	28	360	135	52	680	199	78	1000
8	3	60	72	28	380	136	53	700	200	78	1020
9	3	60	73	28	380	137	53	700	201	78	1020
10	4	60	74	29	380	138	54	700	202	79	1020
11	4	60	75	29	380	139	54	700	203	79	1020
12	4	80	76	30	400	140	54	720	204	80	1040
13	5	80	77	30	400	141	55	720	205	80	1040
14	5	80	78	30	400	142	55	720	206	80	1040
15	6	80	79	31	400	143	56	720	207	81	1040
16	6	100	80	31	420	144	56	740	208	81	1060
17	6	100	81	32	420	145	56	740	209	82	1060
18	7	100	82	32	420	146	57	740	210	82	1060
19	7	100	83	32	420	147	57	740	211	82	1060
20	8	120	84	33	440	148	58	760	212	83	1080
21	8	120	85	33	440	149	58	760	213	83	1080
22	8	120	86	34	440	150	59	760	214	84	1080
23	9	120	87	34	440	151	59	760	215	84	1080
24	9	140	88	34	460	152	59	780	216	84	1100
25	10	140	89	35	460	153	60	780	217	85	1100
26	10	140	90	35	460	154	60	780	218	85	1100
27	10	140	91	36	460	155	60	780	219	86	1100
28	11	160	92	36	480	156	61	800	220	86	1120
29	11	160	93	36	480	157	61	800	221	86	1120
30	12	160	94	37	480	158	62	800	222	87	1120
31	12	160	95	37	480	159	62	800	223	87	1120
32	12	180	96	38	500	160	62	820	224	88	1140
33	13	180	97	38	500	161	63	820	225	88	1140
34	13	180	98	38	500	162	63	820	226	88	1140
35	14	180	99	39	500	163	64	820	227	89	1140
36	14	200	100	39	520	164	64	840	228	89	1160
37	14	200	101	39	520	165	64	840	229	90	1160
38	15	200	102	40	520	166	65	840	230	90	1160
39	15	200	103	40	520	167	65	840	231	90	1160
40	16	220	104	40	540	168	66	860	232	91	1180
41	16	220	105	41	540	169	66	860	233	91	1180
42	16	220	106	41	540	170	66	860	234	91	1180
43	17	220	107	42	540	171	67	860	235	92	1180
44	17	240	108	42	560	172	67	880	236	92	1200
45	18	240	109	42	560	173	68	880	237	92	1200
46	18	240	110	43	560	174	68	880	238	93	1200
47	18	240	111	43	560	175	68	880	239	93	1200
48	19	260	112	44	580	176	69	900	240	94	1220
49	19	260	113	44	580	177	69	900	241	94	1220
50	19	260	114	44	580	178	70	900	242	94	1220
51	20	260	115	45	580	179	70	900	243	95	1220
52	20	280	116	45	600	180	70	920	244	95	1240
53	20	280	117	46	600	181	71	920	245	96	1240
54	21	280	118	46	600	182	71	920	246	96	1240
55	21	280	119	46	600	183	72	920	247	96	1240
56	22	300	120	47	620	184	72	940	248	97	1260
57	22	300	121	47	620	185	72	940	249	97	1260
58	22	300	122	48	620	186	73	940	250	98	1260
59	23	300	123	48	620	187	73	940	251	98	1260
60	23	320	124	48	640	188	73	960	252	98	1280
61	24	320	125	49	640	189	74	960	253	99	1280
62	24	320	126	49	640	190	74	960	254	99	1280
63	24	320	127	49	640	191	74	960	255	100	1280

Note: Continuous ON Mode illuminates all LEDs without flashing. This feature is activated when Strobe Rate and Strobe Duration are both set to DMX value 255.

HungaroFLASH LED STROBE Luminaire **RDM Parameter IDs**

The following tables outline and describe all the RDM parameters IDs associated with HungaroFLASH LED STROBE Luminaires.

• Table 18, "HungaroFLASH LED STROBE Luminaire RDM Product Parameters IDs"
• Table 19, "HungaroFLASH LED STROBE Luminaire RDM UID"
• Table 20, "HungaroFLASH LED STROBE Luminaire RDM Parameters IDs"

TABLE 18: HUNGAROFLASH LED STROBE LUMINAIRE RDM PRODUCT PARAMETERS IDS

Model ID	Manufacturer	Model Description	Product Category
0x0001	**HungaroFLASH**	**LED STROBE White** **LED STROBE RGB** **LED STROBE UV**	**0x0101**

TABLE 19: HUNGAROFLASH LED STROBE LUMINAIRE RDM UID

UID					
MSB of ESTA **24**H	LSB of ESTA **2A**H	1st of Unique Seq. **23**H (W) **03**H (RGB) **21**H (UV)	2nd of Unique Seq. **XX**H (year) Example: **14**H = 2014	3rd of Unique Seq. **XX**H (month) Example: **10**H = Oct	4th of Unique Seq. **XX**H (Serial Number)

After discovery if you see example: 242A23150675 this tells you the date of Manufacturing (2015-June-SN=75) and Model Description (LED STROBE WHITE).

TABLE 20: HUNGAROFLASH LED STROBE LUMINAIRE RDM PARAMETERS IDS

GET allowed	SET allowed	PID description	PID value	Comment
		Category – Network Management		
-	-	DISC_UNIQUE_BRANCH	0x0001	
-	-	DISC_MUTE	0x0002	
-	-	DISC_UN_MUTE	0x0003	
		Category - RDM Information		
✓	-	SUPPORTED_PARAMETERS	0x0050	retrieve a packed list of supported PIDs
✓	-	PARAMETER_DESCRIPTION	0x0051	retrieve the definition of some manufacturer-specific PIDs
		Category – Product Information		
✓	-	DEVICE_INFO	0x0060	retrieve a variety of information about the device that is normally required by a controller
✓	-	DEVICE_MODEL_DESCRIPTION	0x0080	provides a text description for the device model type
✓	-	MANUFACTURER_LABEL	0x0081	provides an ASCII text response with the Manufacturer name for the device
✓	✓	DEVICE_LABEL	0x0082	provides a means of setting a descriptive label for each device
✓	✓	FACTORY_DEFAULTS	0x0090	instruct a device to revert to its Factory Default user settings
✓	-	SOFTWARE_VERSION_LABEL	0x00C0	get a descriptive ASCII text label for the device's operating software version
✓	-	BOOT_SOFTWARE_VERSION_ID	0x00C1	retrieve the unique Boot Software Version ID for the device
✓	-	BOOT_SOFTWARE_VERSION_LABEL	0x00C2	et a descriptive ASCII text label for the Boot Version of the software
		Category - DMX512 Setup		
✓	✓	DMX_PERSONALITY	0x00E0	set the responder's DMX512 Personality
✓	-	DMX_PERSONALITY_DESCRIPTION	0x00E1	get a descriptive ASCII text label for a given DMX512 Personality
✓	✓	DMX_START_ADDRESS	0x00F0	set or get the DMX512 start address
✓	-	SLOT_INFO	0x0120	retrieve basic information about the functionality of the DMX512 slots
✓	-	SLOT_DESCRIPTION	0x0121	requesting an ASCII text description for DMX512 slot offsets
✓	-	DEFAULT_SLOT_VALUE	0x0122	requesting the default values for the given DMX512 slot offsets
		Category – Sensors		
✓	-	SENSOR_DEFINITION	0x0200	retrieve the definition of a specific sensor
✓	-	SENSOR_VALUE	0x0201	retrieve or reset sensor data
		Category – Power/Lamp Settings		
✓	-	DEVICE_HOURS	0x0400	retrieve the number of hours of operation the device has been in use
✓	-	DEVICE_POWER_CYCLES	0x0405	retrieve the number of Power-up cycles for the device
		Category – Control		
✓	✓	IDENTIFY_DEVICE	0x1000	used for the user to physically identify the device: supported loud, quiet
-	✓	RESET_DEVICE	0x1001	instruct the responder to reset itself

CLEANING AND CARE

WARNING!

All cleaning should be performed with power completely removed from the luminaire. Never remove protective covers when luminaire is powered. Wear appropriate protective eye wear and gloves when cleaning the fixture. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center.

Special Cleaning and Care Instructions

Being a solid-state fixture, and unlike most fixtures, the HungaroFLASH LED STROBE Luminaire requires very little routine maintenance by the user. This section covers portions of the luminaire that can be removed for cleaning.

The HungaroFLASH LED STROBE Luminaire special care when it comes to cleaning front GLASS assembly. Additional care needs to be taken with the plastic components because they are much easier to scratch or damage than glass.

The following is a list of cleaning materials required to care for your HungaroFLASH LED STROBE Luminaire:

- Lint free lens tissue
- Lint or powder free gloves
- Reagent grade isopropyl alcohol*
- A mild soap solution.

Note: Reagent grade isopropyl alcohol is good to use on the HungaroFLASH LED STROBE Luminaire plastic optics with anti-reflection coatings. If the lens is still dirty after using isopropyl alcohol, for instance if fingerprints or oil is just redistributed and not cleaned off the optic, then a mild soap and water solution can be used to gently wash the lens. Repeat the cleaning with isopropyl alcohol to eliminate streaks and soap residue.

WARNING!

Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the HungaroFLASH LED STROBE Luminaire. These types of cleaners or solvents can permanently damage the optics or housings of the fixture. If you have any questions regarding the use or care of your SL NITRO 510 LED STROBE Luminaire, please contact HungaroFLASH technical support or your local Authorized Dealer.

Front GLASS Cleaning

To clean the front glass:

1. Disconnect luminaire from power and allow to cool completely.
2. Apply a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.
3. Wipe all debris, dirt, fingerprints, etc. from glass.
4. Using a second lint-free lens tissue, wipe off any alcohol residue.

Service and Maintenance

For all other service and maintenance issues, please contact your local HungaroFLASH office or an Authorized Service Center.

WARNING!

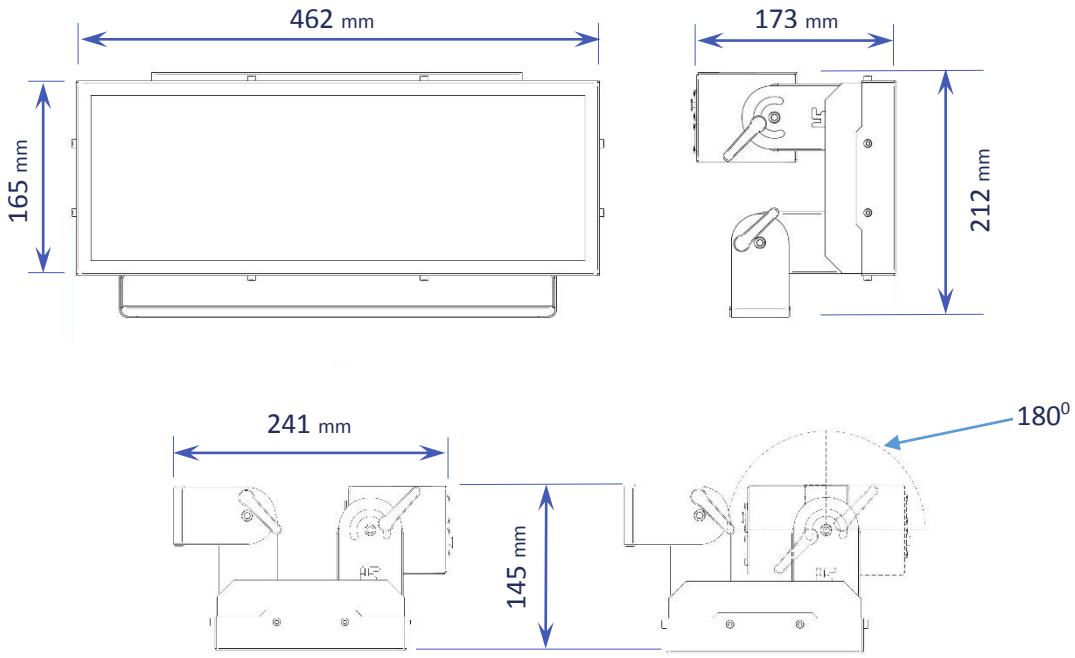
Disassembly (other than as described herein), alterations, unauthorized service, etc. will void the product warranty. Contact your local HungaroFLASH office or an Authorized Service Center for technical support and service.

TECHNICAL SPECIFICATIONS

HungaroFLASH LED STROBE Luminaire Operational **Specifications**

Source	High Intensity White LED Array 1452 pcs BRIDGELUX LED (0.2W ea.)
Lifetime	50000 hours
Beam Angle	60 Degree (120 Degree with no OPTICs)
Light Output	40 kiloLumen
Color Temperature	6427 Kelvin (see Report)
Dimming	12 bit
Flicker FREE for CAMERA	Up to 12000 frame per second
Input Voltage (AC)	100V to 240V (+/- 10%, auto-ranging)
Current (AC)	4.6 Amps (100V) / 2.0 Amps (230V)
POWER DRAW	450W
Power Connector	20A POWERCON
Frequency	50/60Hz
Control Protocols	DMX512 (1990) / DMX512A (RDM)
Ambient Temperature	-20 to 40 Degrees C (-4 to 104 Degrees F)
Humidity	5%-95% Non-condensing
Cooling	Natural Air Cooling
Weight	15.4 lbs (7 kg)
Housing	Die Cast Aluminum with Powder Coating
Compliance	cETLus marked (North American models) and CE Marked (International models)
IP Rating	IP43
Operatin position	Any

HungaroFLASH LED STROBE Luminaire **Dimensions**



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LED Lamp Measurement Protocol

Examiner: P.Básthy **Company:** HungaroFLASH

Measuring Date: 2014.11.21 **Main Power:** 230 V 50Hz AC

Measurement Equipment: Spectroradiometer MACAM 1 nm S/N 7132
Absol. Adjustment: 0.25 m dist. In front of the lamp
Uncertainty: ±5%

Statement: Room temperature: 25^{0}C

Measurements results:

Luminaire Nr.	SHOWLINE Nitro 510	HungaroFLASH SOL 1,5k	empty	empty
U in V	230	230		
I in A	1.34	1.47		
P in W	298-310	325-340		
Illuminance in LUX	94168	110907		
x	0,3019	0,3150		
y	0,3106	0,3226		
z	0,3874	0,3624		
Correlated Color Temperature in K	7379	6427		
MACAM calculated CT